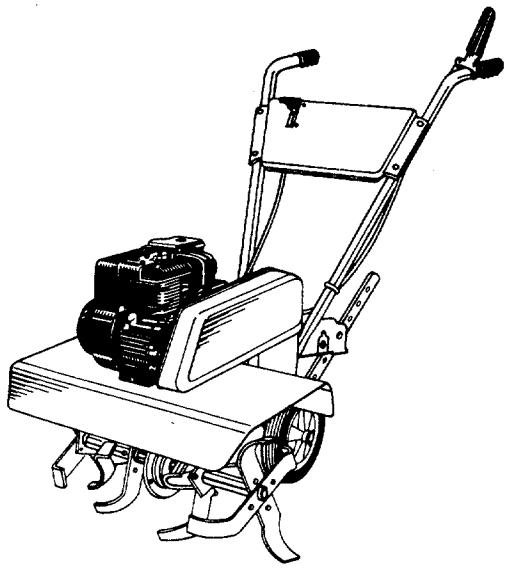
$1.00

OWNER'S GUIDE

ASSEMBLY • OPERATION • MAINTENANCE • PARTS



CHAIN DRIVE TILLER

Model Number 219-320-000

Important: Read Safety Rules and Instructions Carefully

PRINTED IN U.S.A.

FORM NO. 770-5258D

INDEX

Dear Customer,

So often throughout the year we are all in a rush to meet our daily obligations.

However, we at MTD Products Inc are taking a quick moment out to say. . .

"Thank you for your business."

Sincerely,
MTD PRODUCTS INC

INSTRUCTIONS GIVEN WITH THIS SYMBOL ARE FOR PERSONAL SAFETY. BE SURE TO FOLLOW THEM.

LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, Peerless components, motor, battery (except as noted below) or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

A battery which proves defective within ninety (90) days will be replaced without charge. After 90 days but within one year from the date of purchase, MTD will replace the defective battery for a charge of 1/12 of the current retail price of the battery for each full 30 day period between the date of purchase and the date of return.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

WARNING: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer.

To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

SAFE OPERATION PRACTICES FOR TILLERS

1. It is suggested that this manual be read in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.

2. Your tiller is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times.

3. Read this owner's guide carefully. Be thoroughly familiar with the controls and the proper use of the equipment.

4. Never allow children to operate a power tiller. Only persons well acquainted with these rules of safe operation should be allowed to use your tiller.

5. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.

6. Keep the area of operation clear of all persons, particularly small children and pets.

7. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.

8. Do not wear loose fitting clothing that could get caught on the tiller.

9. Do not start the engine unless the shift lever is in the neutral (N) position.

10. Do not stand in front of the tiller while starting the engine.

11. Do not place feet and hands on or near the tines when starting the engine or while the engine is running.

12. Never attempt to make a wheel or depth bar adjustment while the engine is running.

13. Do not leave the tiller unattended with the engine running.

14. Do not walk in front of the tiller while the engine is running.

15. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill gasoline tank indoors, while the engine is running, or while the engine is still hot. Replace gasoline cap securely, and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.

16. Do not run the engine while indoors. Exhaust gases are deadly poisonous.

17. Be careful not to touch the muffler after the engine has been running. It is hot.

18. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.

19. Before any maintenance work is performed or adjustments are made, remove the spark plug wire and ground it on the engine block for added safety.

20. Use caution when tilling near buildings and fences. Rotating tines can cause damage or injury.

21. Before attempting to remove rocks, bricks and other objects from tines, stop the engine and be sure the tines have stopped completely. Disconnect the spark plug wire and ground to prevent accidental starting.

22. Check the tine and engine mounting bolts at frequent intervals for proper tightness.

23. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.

24. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

NOTE

Reference to left or right side of the tiller is determined from behind the unit in the operating position.

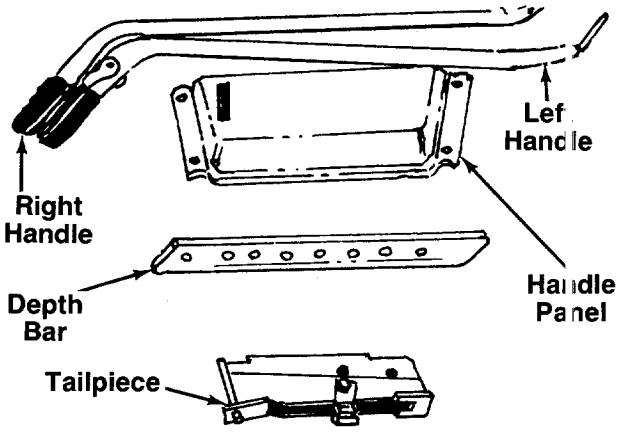


FIGURE 1.

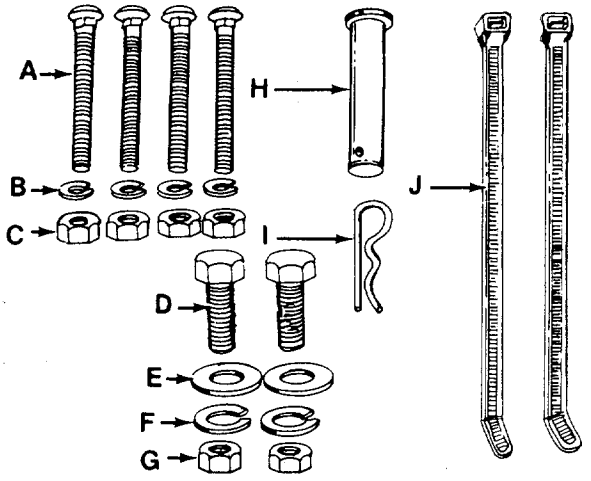


FIGURE 2.

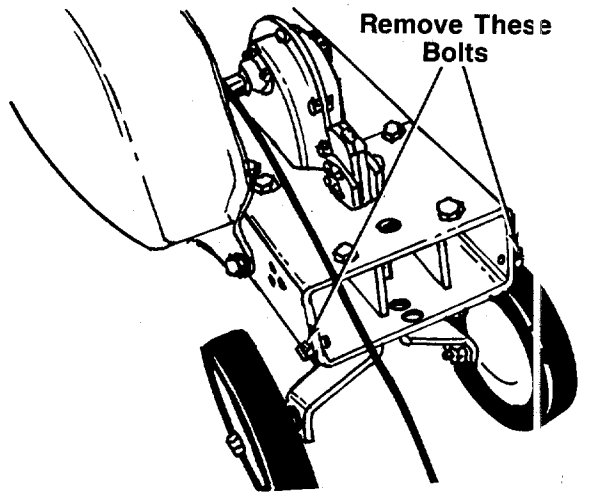


FIGURE 3.

ASSEMBLY INSTRUCTIONS

NOTE

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

Tools Required:

(2) ½" Socket, Open or Box Wrench
(2) 9/16" Socket, Open or Box Wrench

Parts in Carton:

Tiller
Handle Panel*
Depth Bar
Tailpiece
Handles*
Hardware Pack

Contents of Hardware Pack: (See Figure 2)

A (4) Carriage Bolts 5/16-18 x 1.75" Long*
B (4) Lock Washers 5/16" I.D.*
C (4) Hex Nuts 5/16-18 Thread*
D (2) Hex Bolts 3/8-16 x 1" Long
E (2) Belleville Washers
F (2) Lock Washers 3/8" I.D.
G (2) Hex Nuts 3/8-16 Thread
H (1) Clevis Pins
I (1) Hairpin Clip
J (2) Cable Ties
K (1) Self-Tapping Screw (Not Shown)

*May be preassembled on your unit.

Remove the tiller, all loose parts and literature from the carton before discarding carton.

Extend the throttle control and place on the floor. Be careful not to bend or kink control wire.

TAILPIECE INSTALLATION

1. Remove two hex bolts located on the rear of tiller frame. See figure 3. A 9/16" wrench is required.

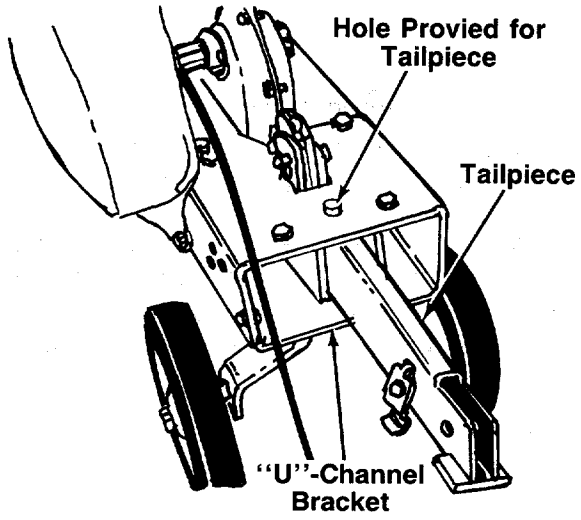


FIGURE 4.

NOTE

Wheel hanger bracket must be removed before the "U"-channel can be pivoted down.

2. Pivot the "U"-channel bracket down. Place the tailpiece in place in holes provided. See figure 4.

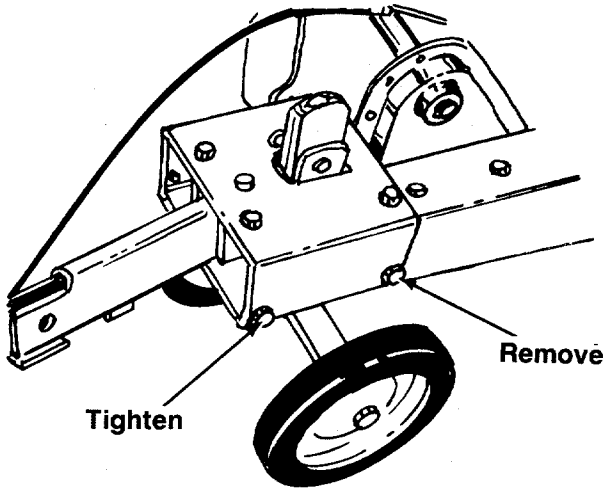


FIGURE 5.

3. Replace hex bolts in frame, which were removed in step 1. Tighten securely. See figure 5.
4. Remove hex bolts and belleville washers from front of frame. See figure 5.

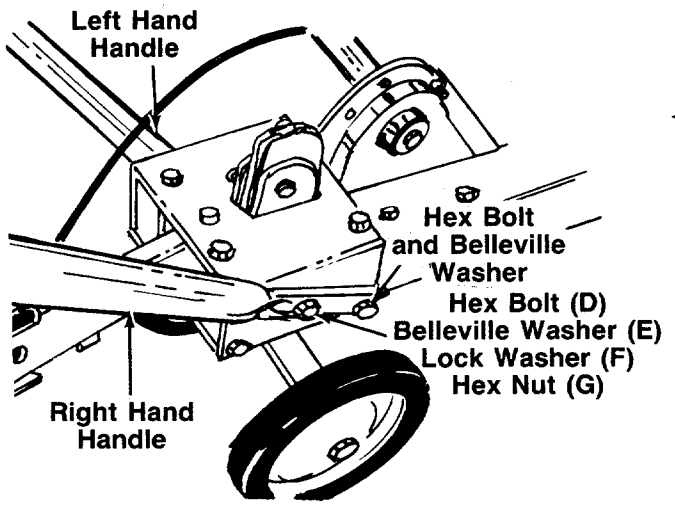


FIGURE 6.

HANDLE ASSEMBLY

1. Place the right and left hand handles in place against the tiller frame. See figure 6.

NOTE

The left hand handle has the clutch grip preassembled. Refer to figure 1.

2. Start the hex bolt and belleville washer by hand (removed in step 4) in the bottom hole in handle.
3. Secure the top hole in handle with hex bolt (D), belleville washers (E), lock washer (F) and hex nut (G). See figure 6.

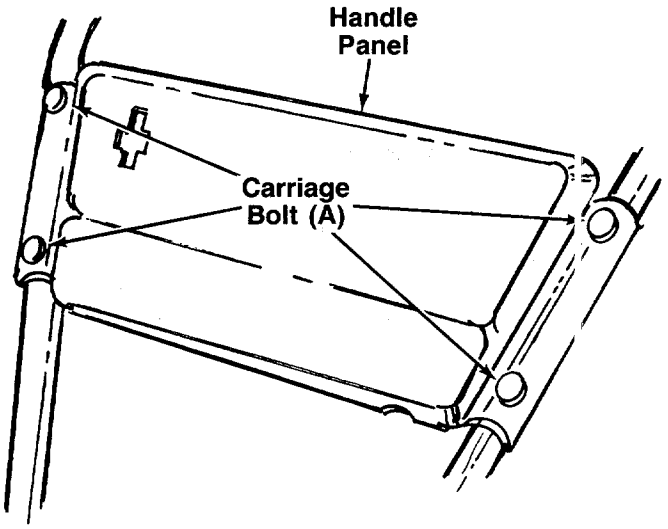


FIGURE 7.

NOTE

If the handle panel was preassembled on your unit, omit steps 4 and 5.

4. Place the handle panel in position on the handles. Secure with four carriage bolts (A), lock washers (B) and hex nuts (C). See figure 7.
5. Tighten securely hex nuts (C) with ½" wrench.
6. Tighten securely hex bolts on lower handle (figure 6) with two 9/16" wrenches.

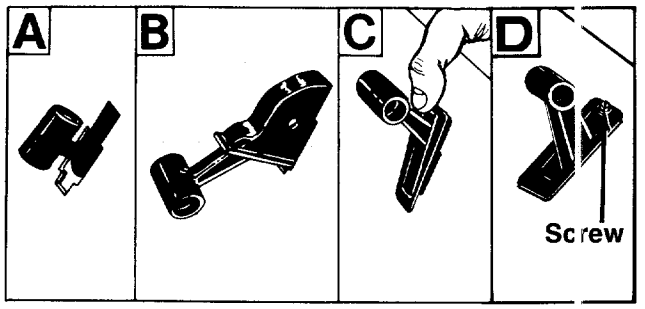


FIGURE 8.

THROTTLE CONTROL INSTALLATION

Assemble the throttle control to the handle panel as follows.

1. Hold the throttle control assembly beneath the handle panel. Turn the control sideways and insert the lever up through the wide portion of the slot on the handle panel. See figure 8A.
2. After the end of the lever is through the slot, turn and then tip the control forward as shown in figure 8B to slide it through the slot.

NOTE

The lever must be all the way to the back of the control housing as shown in figure 8B.

3. Push the control back into the slot in the handle panel and press in place. Be certain the control is locked securely into the slot. See figure 8C.
4. Secure the throttle control to the handle panel using self-tapping screw (K). See figure 8D.

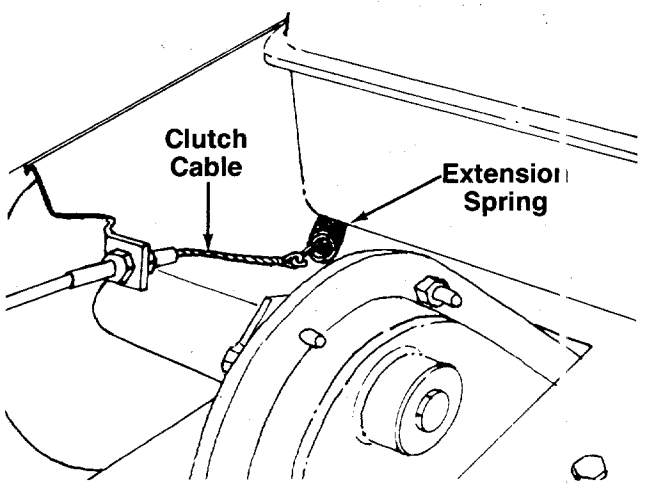


FIGURE 9.

ATTACHING CLUTCH CABLE

1. Hook the end of clutch cable (already attached to tiller) over the extension spring as shown in figure 9.

NOTE

If spring has come loose, it must be reassembled to the weld pin on the idler bracket.

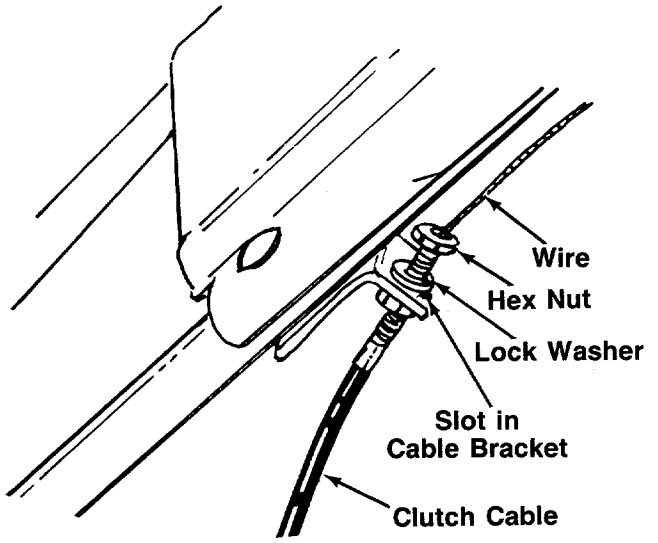


FIGURE 10.

2. Remove one nut and lock washer from other end of clutch cable. Slip the wire up through slot on clutch cable bracket. Start hex nut and lock washer back on end of clutch cable. See figure 10. Do not tighten at this time.

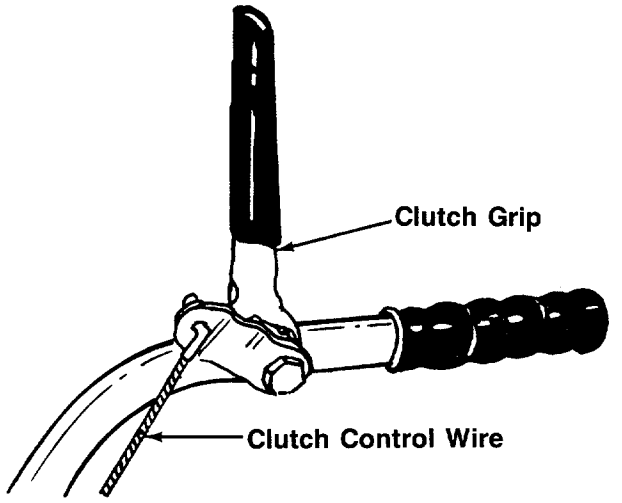


FIGURE 11.

3. Hook the "Z"-end of the clutch cable wire into clutch grip. See figure 11.
4. Hold the clutch grip so that the grip is down against the handle. Adjust the hex nuts at the cable bracket so that the slack is taken out of the control wire. Tighten the two hex nuts against the cable bracket. Control wire should now be straight.

NOTE

Do not overtighten control wire. Too much tension may cause it to break.

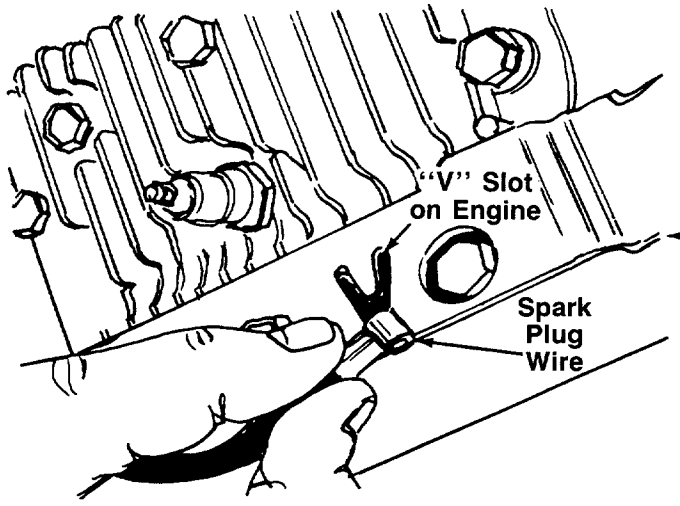
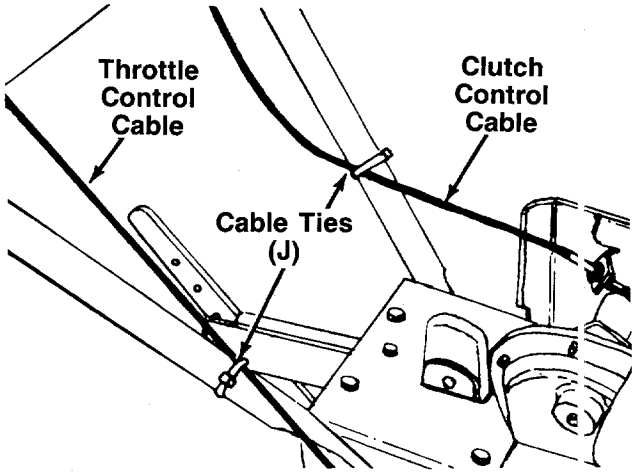


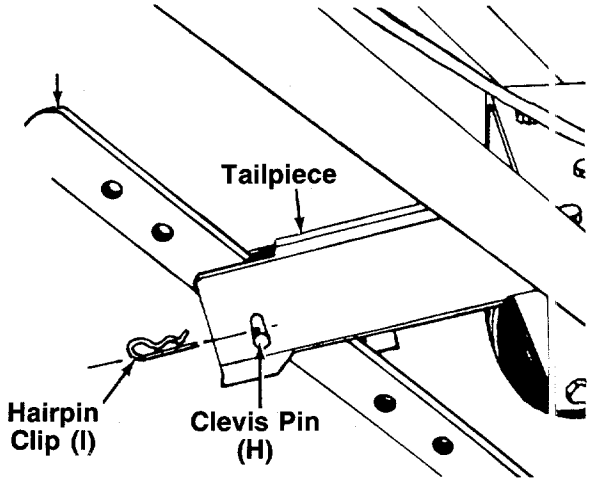
FIGURE 12.

5. To check the adjustment, disconnect the spark plug wire from spark plug to prevent accidental starting. Secure end of spark plug wire in the "V" slot on the engine. See figure 12. With the clutch grip released (neutral position), pull starter cord several times. **The tines should not turn.** If they do, adjust the hex nuts at the clutch cable bracket. Check again for correct adjustment.



6. Secure the throttle control cable and clutch control cable to the handles with cable ties (J) provided. Cut off excess ends. See figure 13.

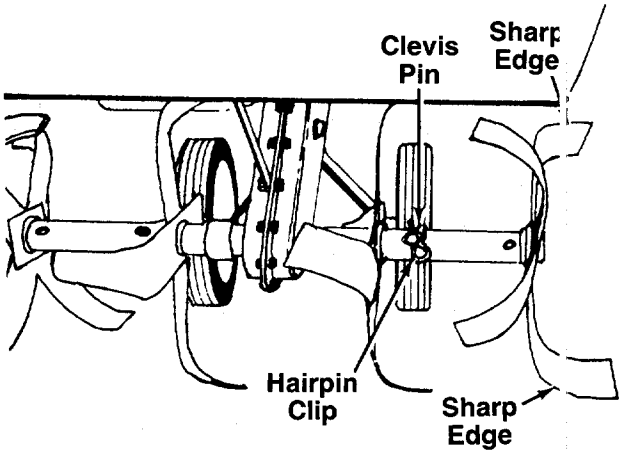
FIGURE 13.



DEPTH BAR INSTALLATION

Place the depth bar in position on the tailpiece. Secure with clevis pin (H) and hairpin clip (I). Round end of depth bar goes to the top. See figure 14.

FIGURE 14.



TINE ASSEMBLIES

Check to be certaint the tine assemblies are on the tine shaft so that the sharp edge enters the soil first. See figure 15.

FIGURE 15.

CONTROLS

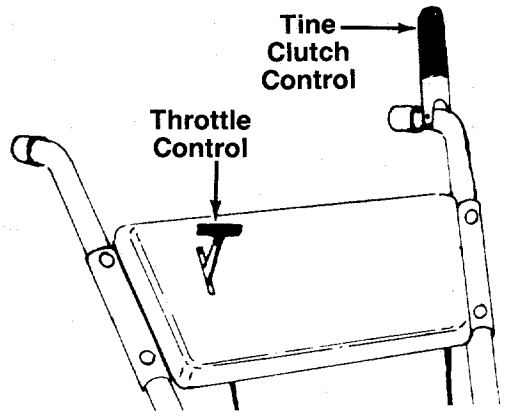


FIGURE 16.

THROTTLE CONTROL

The throttle control lever is located on the handle panel. It controls the engine speed and stops the engine. See figure 16.

TINE CLUTCH CONTROL

The clutch control lever is located on the left handle. See figure 16. Squeezing the lever against the handle engages the tine drive. Release the lever to stop the tines from turning.

DEPTH STAKE

The depth stake controls the tilling depth. Refer to "How to Use Your Tiller" section on page 10.

OPERATION

GAS AND OIL FILL-UP

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your tiller. Read instructions carefully.

NOTE

Your tiller is shipped without oil; however, a small amount of oil may be present from the factory.

TO START ENGINE

WARNING

BE SURE NO ONE IS STANDING IN FRONT OF THE TILLER WHILE THE ENGINE IS RUNNING OR BEING STARTED.

1. Attach spark plug wire to spark plug.
2. Move the throttle control lever forward to FAST or START position. Make certain clutch lever is released. See figure 16.
3. Move choke lever to CHOKE position.

NOTE

A warm engine may not require choking.

4. Grasp starter handle (see figure 17) and pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point). Let the rope rewind slowly.
5. Pull rope with a rapid, continuous, full arm stroke. Keep a firm grip on start handle. Let rope rewind slowly. Do not let starter handle snap back against starter.
6. Repeat preceding instructions 4 and 5 until engine fires. When engine starts, move choke lever on engine halfway between CHOKE and RUN.

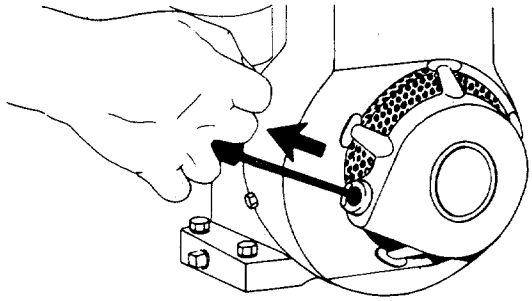


FIGURE 17.

7. Move throttle control to SLOW position for a few minutes warm-up. Move choke lever to RUN position as engine warms up.

NOTE

In order to idle smoothly, a new engine may require 3 to 5 minutes running above slow idle speed. Idle speed has been adjusted to be correct after this break-in period.

TO STOP ENGINE

1. Move throttle control lever to STOP position. See figure 16.
2. Disconnect spark plug wire from spark plug and ground against the engine to prevent accidental starting while equipment is unattended.

HOW TO USE YOUR TILLER

The tiller is a precision built machine designed for seed bed preparation, cultivating, furrowing and mulching. It is engineered to minimize the hardest work in the vegetable or flower garden, to till the soil for planting and cultivating, and to perform many other useful labor saving tasks in the garden. With the proper amount of care and maintenance, this machine will provide the owner with many years of service.

WHEEL POSITION

The tiller is shipped with the wheels adjusted such that the unit sits level. During digging as the tines enter the ground and the front of the tiller lowers, the wheels must be raised to level the unit, which is essential for proper engine operation. This adjustment is made by removing the clevis pin and hairpin clip from wheel yoke, raising the wheels to the desired height, and replacing the clevis pin and hairpin clip. See figure 18.

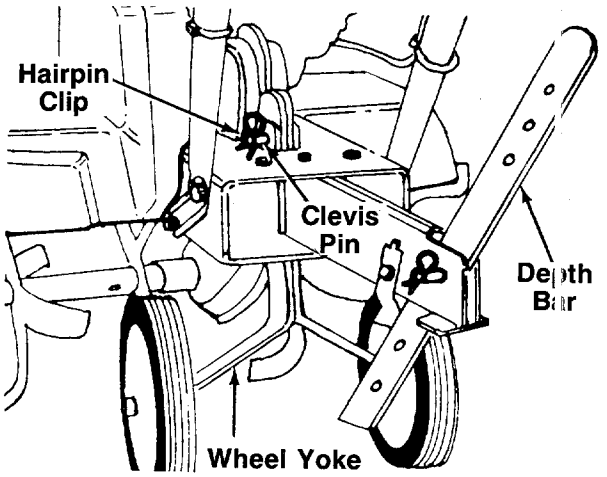


FIGURE 18.

CONTROLLING SPEED AND TILLING DEPTH:

1. **Wheel Yoke Adjustment:** Place wheel yoke so that the wheels are forward (nearest point between wheels and tines) for shallow tilling, cultivating and transport. The forward speed will increase. Turn yoke around (farthest point between wheels and tines) for deep tilling. Forward speed will decrease. See figure 19.

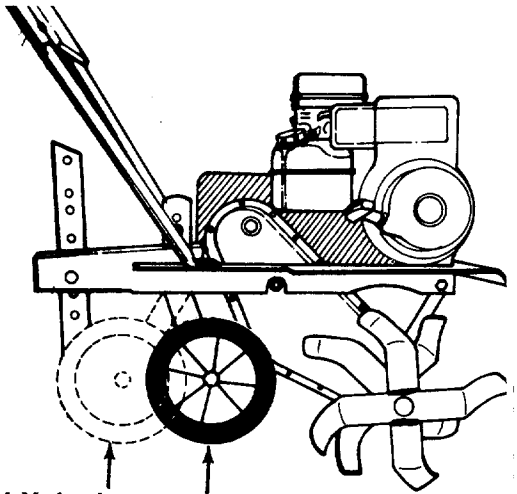


FIGURE 19.

2. **Depth Stake Adjustment:** The depth stake acts as a brake for the tiller and controls the depth and speed at which the machine will operate. Remove the clevis pin and hairpin clip to raise or lower depth stake. See figure 18.

   By increasing the depth of the depth stake, the forward speed of the machine is reduced, and the working depth is increased. See figure 20. When the depth stake is raised, the working depth of the machine is reduced and the forward speed is increased. The working depth of the machine may be predetermined by setting the depth stake and wheels so that the wheels are about four inches from the ground when the tines and depth stake are resting on the ground. This setting will permit a working depth of about four inches. When presetting the working depth, the handles should be adjusted so the hand grips are a little above waist height because the tiller will be lower when the tines and depth stake penetrate the ground.

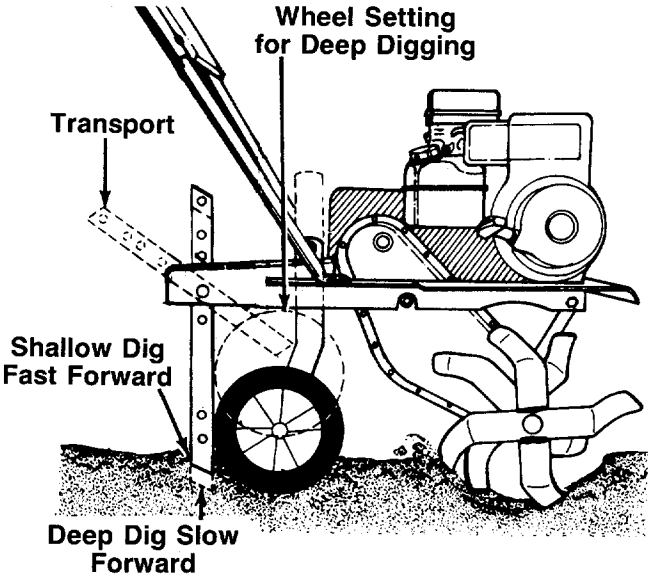


FIGURE 20.

When tilling, leave approximately 8 inches of untilled soil between the first and second tilling paths, then make the third path between the first and second as shown in figure 21. In some soils, the desired depth is obtained the first time over the garden. In other soils, the desired depth is obtained by going over the garden two or three times. In the latter case, the depth stake should be lowered before each succeeding pass over the garden. Passes should be made across the length and width of the garden alternately. Rocks which are turned up should be removed from the garden area.

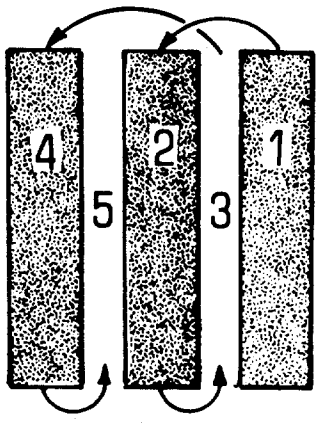


FIGURE 21.

3. **Handle Pressure:** Further control of tilling depth and travel speed can be obtained by variation of pressure on the handles. A downward pressure on the handles will reduce the working depth and increase the forward speed. An upward pressure on the handles will increase the working depth and reduce the forward speed. The type of soil and working conditions will determine the actual setting of the depth stake and the handle pressure required.
4. **Throttle Control:** The throttle control lever adjusts the engine speed and stops the engine. With the throttle control knob pushed completely forward, the carburetor is in START position. Pulling the throttle control back slightly adjusts the engine speed to FAST. Pulling the throttle back further reduces the engine speed to SLOW. Pull the throttle completely back to stop the engine.

   Use maximum engine speed for deep tilling. Move the throttle control to SLOW when transporting the tiller.

TRANSPORTING THE TILLER

To transport the tiller to or from the garden, raise the depth stake to its highest position. See figure 20. With the throttle control in SLOW position, the unit will move under its own power, without damaging grass areas as long as it is allowed to move freely. If the operator holds back, it will start to dig.

CULTIVATING

For cultivating, a two to three inch depth is desirable. Setting the wheels and depth stake so that the wheels are about two inches above the ground while the tiller is resting on the tines and depth stake will allow the machine to work at cultivating depth. The throttle should be set to control forward movement to a slow walking speed. With standard tines, the working width of the machine is 26 inches. For cultivation, this may be reduced to 13 inches by removing the outer tines.

Tilling width can be reduced from 26 inches to 24 inches by removing the clevis pins and hairpin clips and sliding the outer tines in one inch, and replacing the clevis pins and hairpin clips.

When laying out plant rows, be sure to allow enough width to permit cultivation between the rows. In growing corn or similar crops, check-row planting will permit cross cultivation and practically eliminate hand hoeing. See figure 22.

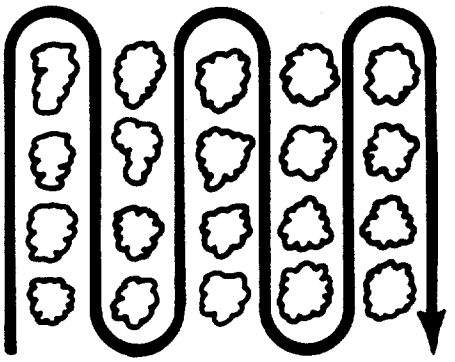


FIGURE 22.

The tiller has many uses other than tilling and cultivating a garden. One of these is the preparation of lawn area for seeding. The tiller will prepare a deep seed bed which will be free of hard untilled spots, allowing a better stand of grass to grow. The tiller is very useful for loosening hard soil for excavation with a shovel. NO tedious hand pickwork will be necessary. Your tiller may be used for mixing compost in the pile, or for mixing it with the soil in your garden. This should be done after the soil has been broken to the full working depth. The compost should be worked in to a depth of six to eight inches. This may be done by working the length of the garden, and then by making separate passes across its width. The addition of decayed organic matter will substantially increase the fertility of your garden. For proper decaying action, fertilizer should be applied and worked in with the mulch materials. Breaking up leaves and straw and mixing it with several inches of soil causes the soil to hold moisture longer and allows proper aeration of the plant root system. This also retards the growth of weeds.

The U.S. Department of Agriculture and various state and local agencies offer published booklets and expert advice on all phases of gardening. They should be consulted regarding soil information, planting dates,and the most satisfactory varieties of crop for your particular area.

ADJUSTMENTS

WARNING

Disconnect the spark plug wire and ground against the engine before performing any adjustments, repairs, or maintenance.

WHEEL ADJUSTMENTS

To adjust the wheel yoke and wheel position, refer to "How To Use Your Tiller," on page 10.

DEPTH STAKE ADJUSTMENT

To adjust the depth stake, refer to "How To Use Your Tiller" on page 10.

TINE WIDTH ADJUSTMENT

To adjust the tine width, refer to "Cultivating" or page 11.

TINE CLUTCH CONTROL ADJUSTMENT

To adjust the tine clutch control, refer to step number 4 on page 7.

CARBURETOR ADJUSTMENT

WARNING

If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and tines. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude or load. If adjustments are needed, refer to the engine manual packed with the tiller.

NOTE

A dirty air cleaner will cause engine to run rough. Be certain air cleaner is clean and attached to the carburetor before adjusting carburetor. Do not make unnecessary adjustments. Factory settings are satisfactory for most applications and conditions.

THROTTLE CONTROL ADJUSTMENT

To obtain satisfactory engine performance, the engine throttle control must be adjusted properly. If it is necessary to check the engine control adjustments, proceed as follows.

1. Loosen the cable clamp screw. See figure 23.
2. With the throttle control in FAST position (see figure 16) and the cable connected to the adapter lever, push the cable through the cable clamp in the direction shown in figure 23 until the adapter lever is as far up as it will go.
3. Tighten the cable clamp screw.
4. Check that the engine stops when throttle control is moved to STOP position. If engine does not stop, loosen cable clamp screw and readjust by pulling cable backward slightly until engine stops. Retighten cable clamp screw.

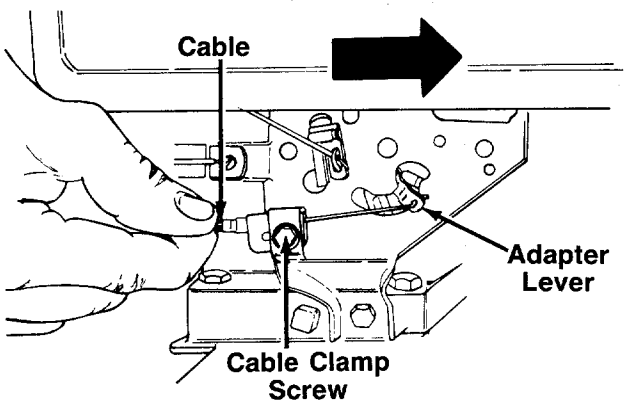


FIGURE 23.

LUBRICATION

WARNING

Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on tiller.

Pivot Points—Remove the belt cover and lubricate all moving parts and pivot points at least once a season using SAE 30 engine oil.

Chain Case—The chain case is pre-lubricated and sealed at the factory. It requires no checking unless the chain case is disassembled. To fill with grease, lay the left half of the chain case on its side, add 12 ounces of Plastilube #0 grease and assemble the right half to it. This grease can be obtained at your nearest authorized service dealer. Order part number 737-0133.

MAINTENANCE

WARNING

Disconnect spark plug wire and ground it against the engine before performing any repairs or maintenance.

TROUBLE SHOOTING

Refer to page 14 of this manual for trouble shooting information.

ENGINE

Refer to the separate engine manual for all engine maintenance instructions.

Maintain **engine oil** as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.

Service **air cleaner** every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner, refer to the separate engine manual packed with your unit.

The **spark plug** should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each tilling season; check engine manual for correct plug type and gap specifications.

CLEANING THE TINE AREA

Clean the underside of the tine shield after each use. The dirt washes off the tines easier if washed immediately instead of after it dries.

BELT REMOVAL AND REPLACEMENT

Your tiller has been engineered with a belt made of special material (Kevlar Tensile). It should not be replaced with an off-the-shelf belt.

If belt replacement is required, order belt by part number from your nearest authorized service dealer.

1. Remove the belt cover by removing three self-tapping screws. A 3/8" wrench is required. See figure 24.

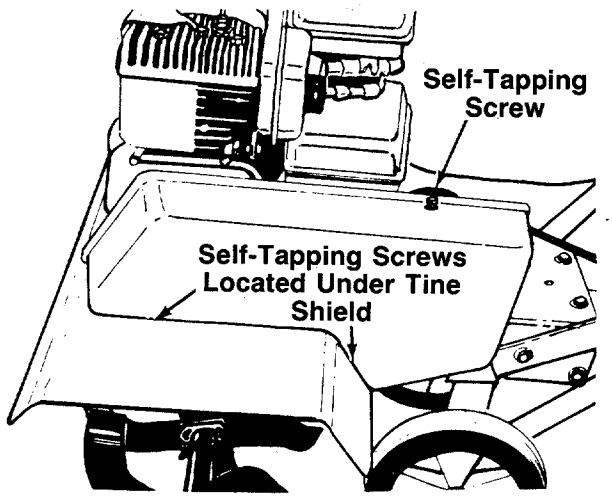


FIGURE 24.

2. After removing three screws, lift off belt cover. See figures 24 and 25.
3. Slip the belt off the chain case pulley first, then off idler pulley. Remove belt from engine pulley. See figure 25.
4. To reassemble the new belt, first place belt over engine pulley. Be sure belt is inside two pins at engine pulley. See figure 25.
5. Belt must be over top of idler pulley. See figure 26. Slip end of belt over the chain case pulley.
6. Reassemble the belt cover. See figure 24.
7. Adjust tine clutch control. Refer to step number 4 on page 7.

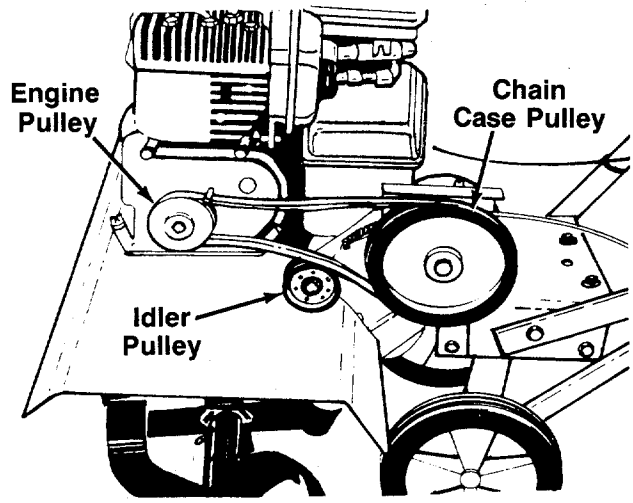


FIGURE 25.

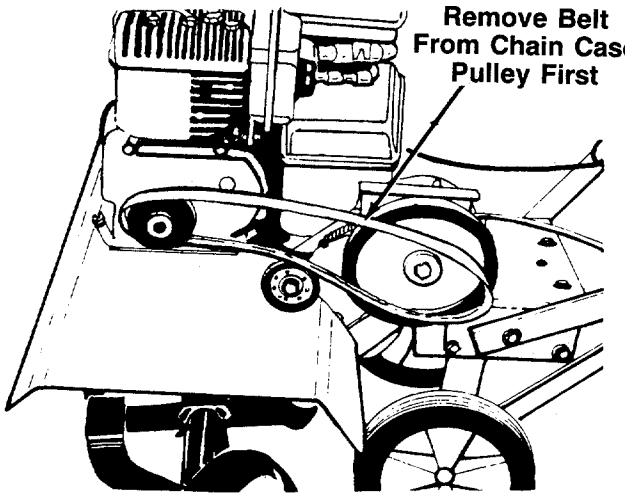


FIGURE 26.

OFF-SEASON STORAGE

If the tiller is to be inoperative for a period longer than 30 days, the following precautions are recommended.

1. Working outdoors, drain all fuel from the fuel tank. Run the engine until it stops from lack of fuel.

WARNING

DO NOT DRAIN FUEL WHILE SMOKING, OR IF NEAR AN OPEN FIRE.

2. Drain all the oil from the crankcase (this should be done after the engine has been operated and is still warm) and refill the crankcase with fresh oil.
3. Protect the inside of the engine for storage as follows.

   Remove spark plug, pour approximately ½ ounce (approximately one tablespoon) of engine oil into cylinder and crank slowly to distribute oil. Replace spark plug.

4. Clean the engine and the entire tiller thoroughly.
5. Wipe tines with oiled rag to prevent rust.

NOTE

When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any springs, bearings and cables.

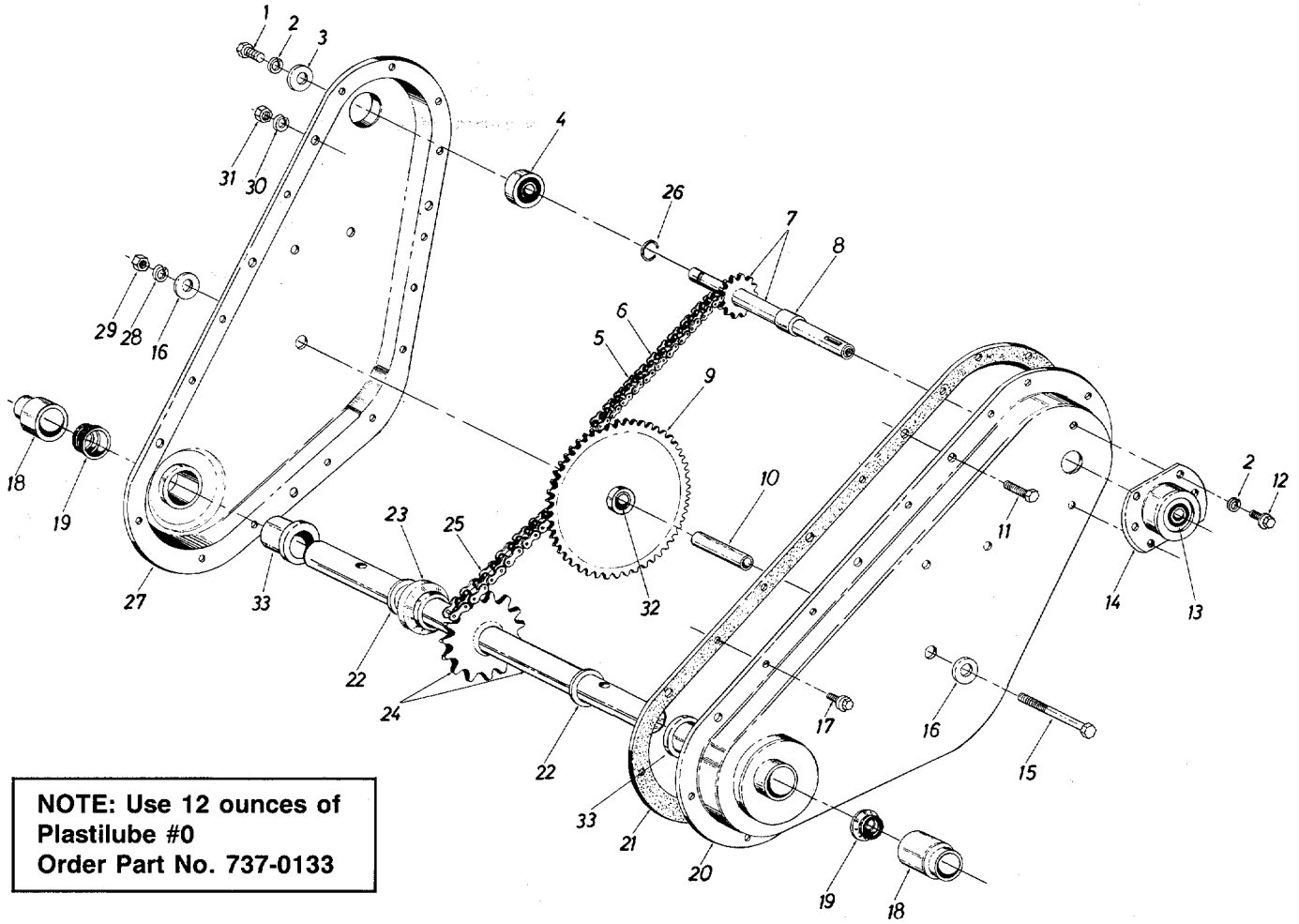
6. Store in a clean, dry area.

Trouble Shooting Guide

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	1. Fuel tank empty, or stale fuel. 2. Throttle control lever not in starting position. 3. Blocked fuel line. 4. Spark plug wire disconnected. 5. Faulty spark plug. 6. Engine flooded.	1. Fill tank with clean, fresh gasoline. 2. Move throttle lever to start position. 3. Clean fuel line. 4. Connect wire to spark plug. 5. Clean, adjust gap or replace. 6. Remove spark plug, dry the plug, and crank engine with plug removed and throttle in off position. Replace spark plug, connect wire and resume starting procedures.
Engine runs erratic	1. Unit running on CHOKE. 2. Spark plug wire loose. 3. Blocked fuel line or stale fuel. 4. Vent in gas cap plugged. 5. Water or dirt in fuel system. 6. Dirty air cleaner. 7. Carburetor out of adjustment.	1. Move choke lever to OFF position. 2. Connect and tighten spark plug wire. 3. Clean fuel line; fill tank with clean, fresh gasoline. 4. Clear vent. 5. Drain fuel tank. Refill with fresh fuel. 6. Clean air cleaner.† 7. Adjust carburetor.†
Engine overheats	1. Engine oil level low. 2. Air flow restricted. 3. Carburetor not adjusted properly.	1. Fill crankcase with proper oil. 2. Remove blower housing and clean.† 3. Adjust carburetor.†
Tines do not engage	1. Foreign object lodged in tines. 2. Tine clevis pin(s) missing. 3. Control cable not adjusted properly. 4. Belt worn and/or stretched.	1. Dislodge foreign object. 2. Replace tine clevis pin(s). 3. Adjust control cable (see assembly instructions). 4. Replace belt.

†Refer to the separate engine manual packed with your unit.
NOTE: For repairs beyond the minor adjustments listed above, please contact your local service dealer.

Model 320

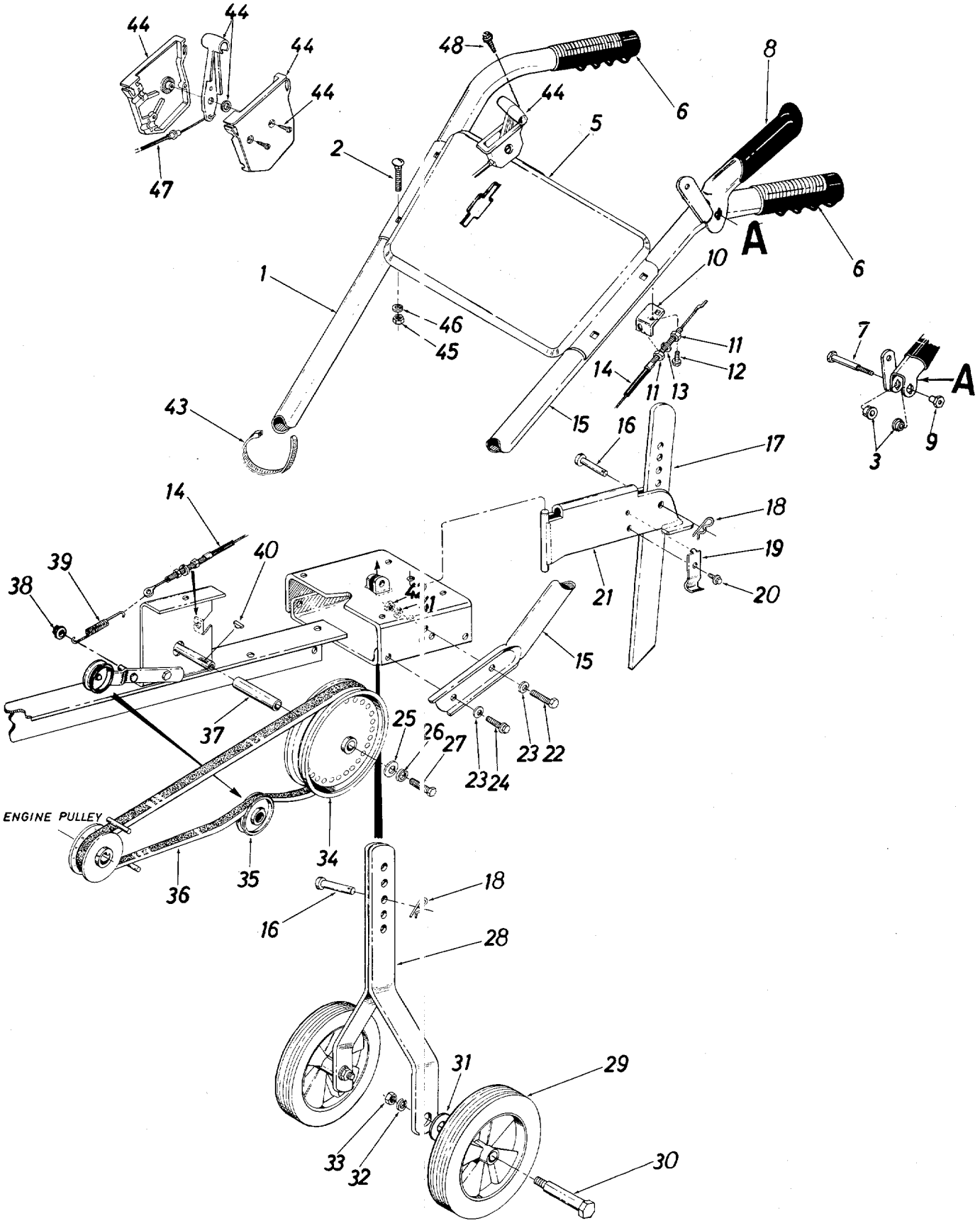


NOTE: Use 12 ounces of Plastilube #0 Order Part No. 737-0133

PARTS LIST FOR CHAIN CASE 784-0103

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	710-0513		Hex L-Scr. ¼-28 x .625" Lg.	17	710-0599		Hex Wash. Hd. Self-Tap Scr. ¼-20 x .50" Lg.
2	736-0329		L-Wash. ¼" I.D.*				
3	736-0176		Fl-Wash. .25" I.D. x .93" O.D. x .125" Thk.	18	731-0487		Dust Cap
				19	721-0175		Seal
4	741-0155		Bearing .62" I.D. x 1.38" O.D. x .437" Thk.	20	14985		Tiller Housing—L.H.
				21	721-0170		Gasket
5	713-0327		#35 Chain 3/8" Pitch x 52 Links—Endless	22	736-0163		Thrust Wash. 1.00" I.D. x .030" Thk.
6	713-0139		Master Link (Service Only)	23	750-0570		Step Spacer
7	04956		Input Shaft Assembly	24	784-0089		Tine Shaft Assembly
8	750-0471		Spacer	25	713-0328		#50 Chain 5/8" Pitch x 46 Links—Endless
9	713-0331		Sprocket Assembly (Includes Ref. No. 32)	26	716-0131		Snap Ring
10	750-0275		Sprocket Hub Tubing 3/8" I.D. x 5/8" O.D. x 1.9" Lg.	27	14984		Tiller Housing—R.H.
				28	736-0169		L-Wash. 3/8" I.D.*
11	710-0118		Hex Scr. 5/16-18 x .625" Lg.*	29	712-0711		Hex Nut 3/8-24 Thd.
12	710-0599		Hex Wash. Hd. Self-Tap Scr. ¼-20 x .50" Lg.	30	736-0119		L-Wash. 5/16" Scr.*
				31	712-0267		Hex Nut 5/16-18 Thd.*
13	741-0155		Bearing .625" I.D. x 1.38" O.D. x .437" Thk.	32	741-0304		Bearing (For Service Only—Must be Press Fit)
14	05034		Bearing Housing	33	731-0374		Bearing
15	710-0629		Hex Scr. 3/8-24 x 2.75" Lg.				
16	736-0258		Fl-Wash. 3/8" I.D. x 1.25" O.D. x .100 Thk.				

Model 320



Model 320

PARTS LIST FOR MODEL 320 TILLER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	749-0356A	N	Handle—R.H.	25	736-0176		Fl-Wash. .25″ I.D. x .930″ O.D. x .120″ Thk.
2	710-0458		Carriage Bolt 5/16-18 x 1.75″ Lg.	26	736-0329		L-Wash. ¼″ I.D.*
3	741-0402		Hex Flange Plastic Brg.	27	710-0412		Hex Scr. ¼-28 x .75″ Lg.
5	784-0036		Handle Panel	28	06813	480	Wheel Bracket Ass'y.
6	720-0180		Grip	29	734-0968		Wheel Ass'y. 9 x 1.75
7	738-0560		Shld. Bolt .38″ Dia. x 1.53″ Lg.	30	738-0318		Shld. Bolt
8	784-0031		Clutch Grip Ass'y.	31	736-0253		Belleville Washer ½″ I.D.
9	738-0561		Shld. Nut ¼-20 Thd.	32	736-0921		L-Wash. ½″ I.D.*
10	15093C	N	Cable Support Brkt.	33	712-0200A	N	Hex Nut ½-20 Thd.
11	712-0256		Hex Jam Nut 5/16-24 Thd.	34	756-0389A	N	Pulley 6.00″ O.D.
12	710-0599		Hex Wash. Hd. Self-Tap Scr. ¼-20 x .50″ Lg.	35	756-0137		Idler Pulley
				36	754-0190		V-Belt ½″ Pitch x 39″
13	736-0119		L-Wash. 5/16″ I.D.*	37	750-0472		Spacer
14	746-0370		Clutch Control Cable	38	726-0106		Cap Speed Nut
15	749-0639		Handle—L.H.	39	732-0387		Extension Spring
16	711-0415		Clevis Pin	40	714-0388		Hi-Pro Key
17	04927	480	Depth Bar	41	736-0169		L-Wash. 3/8″ I.D.*
18	714-0149B	N	Hairpin Cotter	42	712-0342		Hex L-Nut 3/8-16 Thd.
19	732-0380		Depth Bar Spring	43	725-0157		Cable Ties
20	710-0599		Hex Wash. Hd. Self-Tap Scr. ¼-20 x .50″ Lg.	44	831-0823A	N	Throttle Control Box
				45	712-0267		Hex Nut 5/16-18 Thd.*
21	04944	480	Tailpiece Ass'y.	46	736-0119		L-Wash. 5/16″ I.D.*
22	710-0253		Hex Scr. 3/8-16 x 1.00″ Lg.*	47	746-0503		Throttle Control Wire—35″
23	736-0105		Belleville Wash. 3/8″ I.D.	48	710-0779A	N	Self-Tap Scr. #10 x ½″ Lg.
24	710-0649		Hex Wash. Hd. Self-Tap Scr. 3/8-24 x 7/8″ Lg.				

*For faster service obtain standard nuts, bolts, and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

NOTE: The engine is not under warranty by the tiller manufacturer...If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."

NOTE

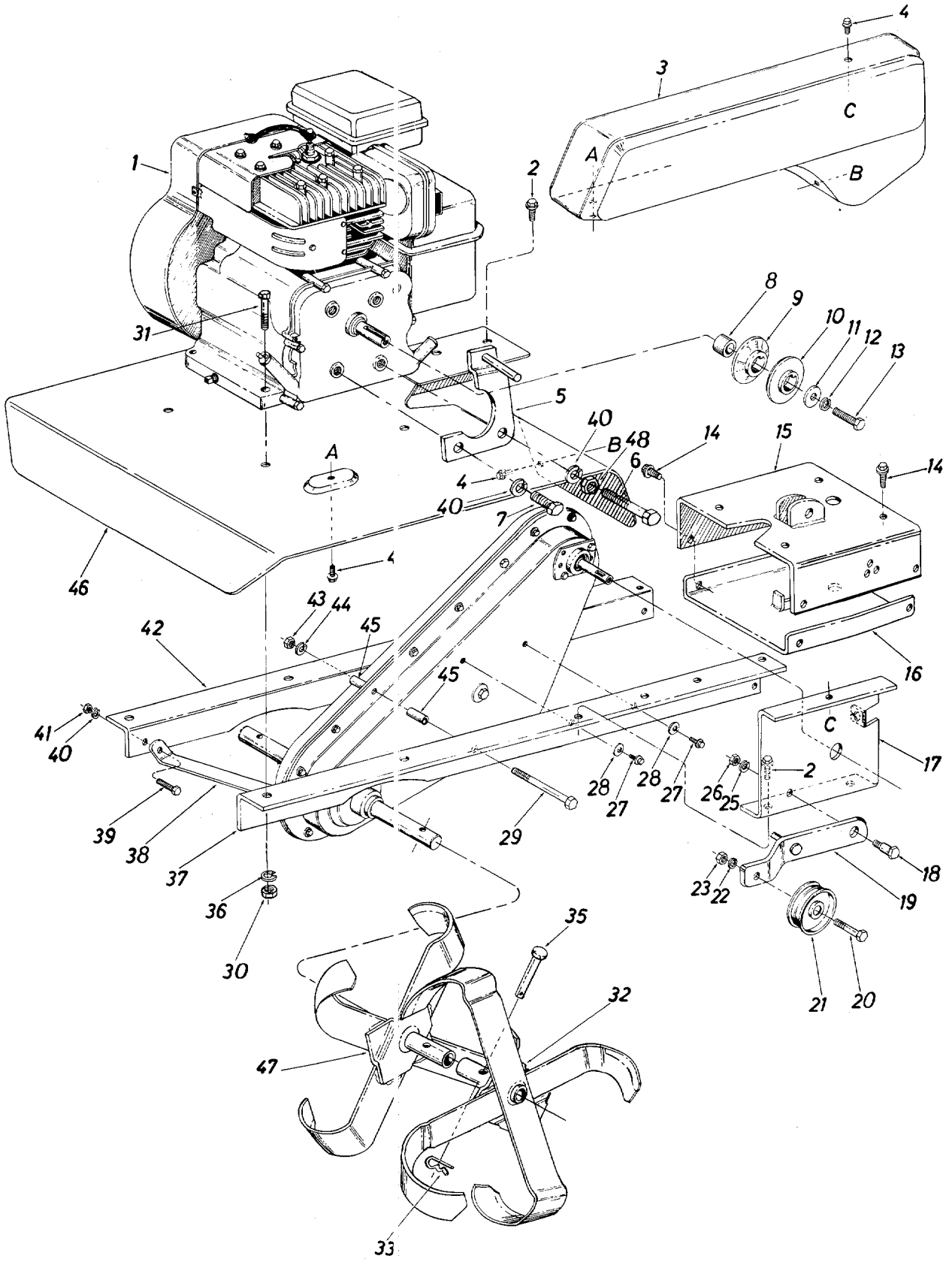
Specifications subject to change without notice or obligation.

CODE: N notates a **new part** (not previously existing). A three digit number is the **color code** (use if color or finish is important when ordering parts). See chart below. [i.e., (part no.)-480 for Brilliant Green Finish].

Color Codes

460—Green Flake	630—Blue
483—Charcoal Grey	635—Grey
498—Yellow	636—White
499—Beige	637—Black
606—Orange	638—Red
629—Silver Flake	640—Green

Model 320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Model 320

PARTS LIST FOR MODEL 320 TILLER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	—		Engine	22	736-0169		L-Wash. 3/8″ I.D.*
2	710-0600		Hex Wash. Hd. Self-Tap Scr. 5/16-24 x .50″ Lg.	23	712-0342		Hex Nut 3/8-16 Thd.
				25	736-0169		L-Wash. 3/8″ I.D.*
3	04958	480	Belt Cover	26	712-0342		Hex Nut 3/8-16 Thd.
4	710-0599		Hex Wash. Hd. Self-Tap Scr. ¼-20 x .50″ Lg.	27	710-0599		Hex Wash. Hd. Self-Tap Scr. ¼-20 x .50″ Lg.
5	784-0114		Belt Keeper Brkt. Ass'y.	28	736-0270		Belleville Washer. .26 I.D. x .75 O.D. x .060
6	710-0593		Hex Bolt 5/16-24 x 2.25 Lg. (Gr. 5)	29	710-0189		Hex Scr. 5/16-18 x 3.0″ Lg.
7	710-0237		Hex Bolt 5/16-24 x .62″ Lg. (Gr. 5)	30	712-0267		Hex Nut 5/16-18 Thd.*
				31	710-0442		Hex Bolt 5/16-18 x 1.50″ Lg.
8	750-0345		Spacer	32	—		See Tine Chart
9	748-0282		Pulley Half	33	714-0149B	N	Hairpin Cotter
10	748-0282		Pulley Half	35	1545-029		Clevis Pin
11	736-0258		Fl-Wash. 3/8″ I.D. x 1.25″ O.D. x .100	36	736-0119		L-Wash. 5/16″ I.D.*
				37	04949B	N	Frame Rail—L.H.
12	736-0169		L-Wash. 3/8″ I.D.*	38	04933		Front Brace Brkt.
13	710-0152		Hex Scr. 3/8-24 x 1.00″ Lg.	39	710-0118		Hex Scr. 5/16-18 x .75″ Lg.*
14	710-0623		Hex Wash. Hd. Self-Tap Scr. 3/8-16 x .75″ Lg.	40	736-0119		L-Wash. 5/16″ I.D.*
				41	712-0158		Hex Cent. L-Nut 5/16-18 Thd.
15	04950		Handle Mounting Brkt. Ass'y.	42	04948B	N	Frame Rail—R.H.
16	04943		U-Channel Brkt. Ass'y.	43	712-0158		Hex Cent. L-Nut 5/16-18 Thd.
17	04934		Idler Mounting Brkt.	44	736-0119		L-Wash. 5/16″ I.D.*
18	738-0322		Shld. Bolt	45	750-0470		Spacer
19	784-0027		Idler Brkt. Ass'y.	46	04941	480	Tine Shield
20	710-0344		Hex Scr. 3/8-16 x 1.50″ Lg.	47	—		See Tine Chart
21	756-0137		Idler Pulley	48	712-0123		Hex Nut 5/16-24 Thd.*

*For faster service obtain standard nuts, bolts, and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

TINE CHART

Part No.	Description
784-0092	Inner Tine Ass'y. Comp.—R.H.
784-0094	Outer Tine Ass'y. Comp.—R.H.
784-0091	Inner Tine Ass'y. Comp.—L.H.
784-0093	Outer Tine Ass'y. Comp.—L.H.

Heavy Duty Garden Tiller Attachments Available for All-Season Use

31-0106 Depth Gauge Wheels (Pair)
31-0107 6-Tine Cultivator (Must be used with 31-0106 Depth Gauge Wheels)
31-0110 8″ Furrower Opener
31-0111 15″ Sweep Cultivator
31-0113 Pneumatic Tires, 13 x 5.00-6 (Pair)
31-0114 Wheel Weights (Pair)
31-0115 Tire Chains, 13 x 5.00 (2 Link) (Pair)
31-0119 Tine Cultivating Shields w/Adapters (Pair)
31-0123 Lawn Aerator (Use with 31-0114 Wheel Weights for added penetration)
31-0144 "V"-Bar Cultivating Kit
Kit Includes: "V"-Bar Frame, 4-Point Cultivating Tines, Hiller/Furrower, Depth Gauge Wheels (Pair).
31-0145 Depth Stake Cultivating Kit
Kit Includes: 8″ Furrower Opener, 15″ Sweep Cultivator, 32″ Leveling Rake, Extra Depth Stake.

Note: Attachments are available through your local dealer or from the factory:
Agri-Fab Inc., 303 W. Raymond Street, Sullivan, Illinois 61951 (217) 728-4334

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service are available through the authorized service firms listed below. All orders should specify the model number of your unit, part numbers, description of parts and the quantity of each part required.

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline,** Briggs & Stratton or Tecumseh Lauson.

NOTE: If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be made.

ALABAMA	**BIRMINGHAM**	
Auto Electric & Carburetor Co.	2625 4th Ave. S. Box 2466	35233
ARKANSAS	**NORTH LITTLE ROCK**	
Sutton's Lawn Mower Shop	5301 Roundtop Drive Box 368, Rt. 4	72117
CALIFORNIA	**PORTERVILLE**	
Billious	75 North D Street	93257
COLORADO	**DENVER**	
Spitzer Industrial Products Co.	6601 N. Washington St.	80229
FLORIDA	**JACKSONVILLE**	
Radco Distributors	4909 Victor St. Box 5459	32207
	HIALEAH	
Small Eng. Dist.	7995 W. 26th Court	33016
GEORGIA	**EAST POINT**	
East Point Cycle & Key Inc.	2834 Church St.	30344
ILLINOIS	**LYONS**	
Keen Edge Co.	8615 Ogden Ave.	60534
INDIANA	**ELKHART**	
Parts & Sales Inc.	2101 Industrial Pkwy. Box 277	46516
IOWA	**DUBUQUE**	
Power Lawn & Garden Equip.	2551 J.F. Kennedy	52001
LOUISIANA	**LAFAYETTE**	
Jourdan Engine Co.	214 W. Vermillion St. Box 3503	70501
MARYLAND	**TAKOMA PARK**	
Center Supply Co.	6867 New Hampshire Ave.	20912
MASSACHUSETTS	**SPRINGFIELD**	
Morton B. Collins Co.	300 Birnie Ave.	01107
MICHIGAN	**MOUNT CLEMENS**	
Power Equipment Dist.	340 Hubbard	48043
MINNESOTA	**PLYMOUTH**	
Hance Distributing Inc.	12795 16th Ave. North	55441
MISSOURI	**EARTH CITY**	
Oscar Wilson Engine & Parts	4159 Shoreline Dr.	63045
	KANSAS CITY	
Automotive Equip. Service	3117 Holmes St.	64109
NEW JERSEY	**ALLOWAY**	
Piersons	Canal St., Box 494	08001
NEW YORK	**CARTHAGE**	
Gamble Dist., Inc.	West End Ave. Box 389	13619
NORTH CAROLINA	**GREENSBORO**	
Dixie Sales Company	335 N. Green Box 1408	27402
OHIO	**CARROLL**	
Stebe's Mid-State Mower Supply	Box 366, 71 High St.	43112
	CLEVELAND	
Bleckrie, Inc.	7900 Lorain Ave.	44102
	WADSWORTH	
National Central	687 Seville Rd.	44281
	YOUNGSTOWN	
Burton Supply Co.	1301 Logan Ave. Box 929	44501
PENNSYLVANIA	**HARRISBURG**	
EECO Inc.	4021 N. 6th St.	17110
	WILLOW GROVE	
Thompson Rubber Co.	850 Davisville Rd.	19090
	PITTSBURGH	
Bluemont Co.	11101 Frankstown Rd.	15235
	PUNXSUTAWNEY	
Frank Roberts & Sons	R.D. 2	15767
	SCRANTON	
Scranton Auto Ignition Co.	1133-35 Wyoming Ave.	18509
TENNESSEE	**KNOXVILLE**	
Ace Distributors	2103 Magnolia	37917
	MEMPHIS	
American Sales & Service, Inc.	3035-43 Bellbrook	38116
TEXAS	**DALLAS**	
Marr Brothers, Inc.	423 E. Jefferson	75203
	SAN ANTONIO	
Engine House Inc.	4918 Golden Quail	78249
UTAH	**SALT LAKE CITY**	
Powered Products	1661 N. Beck St.	84116
VIRGINIA	**ASHLAND**	
RBI Corp.	101 Cedar Ridge Dr.	23005
WASHINGTON	**SEATTLE**	
Equip. Northwest	1410 14th Ave.	98122
WISCONSIN	**MILWAUKEE**	
Wisconsin Magneto Inc.	4727 N. Teutonia St.	53209
PUERTO RICO	**AGUADILLA**	
CIE & Associates, Inc.	Box 427 Ramey Station	00604

WARRANTY PARTS AND SERVICE POLICY (0588)

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

1. **Replacement of Missing Parts** on new equipment.
2. **Replacement of Defective Parts** within the warranty period.
3. **Repair of Defects** within the warranty period.

All claims MUST be substantiated with the following information:

1. **Model Number, Serial Number and/or Data Code** of unit involved.
2. **Date** unit was purchased.
3. **Date of Failure.**
4. **Nature of Failure.**